

## PATENT ABSTRACTS OF JAPAN

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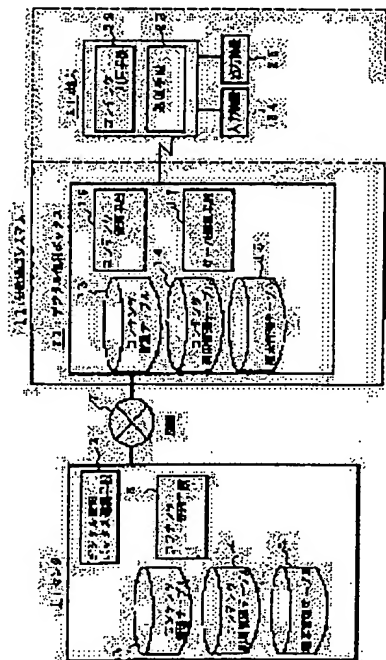
(72)Inventor : MIZUNO KEISUKE  
YANAGAWA MASAHIRO

(54) CONTENT MANAGEMENT SYSTEM AND RECORD MEDIUM

(57)Abstract:

**PROBLEM TO BE SOLVED:** To reduce communication costs and to prevent illegal use by providing a digital authority box at distributed bases such as stores or houses, and allowing the distributed bases to conduct authority management in behalf of authorized organizations.

**SOLUTION:** When a request for content use permission is issued from a user terminal, content use conditions registered in content management tables 3 and 13 are fulfilled and a terminal ID or a user ID is registered in terminal management tables 5 and 15, the content use permission and an encryption key, if necessary, are returned to the origin of the request for the content use permission by content managing means 6 and 16. Besides the content managing means 6 and 16, a means connected through a line 7 with a center at the time of start or at any time for receiving and preserving the down-loads of the content management tables 3 and 13 and the terminal management tables 5 and 15, and for up-loading the contents of content use management tables 4 and 14 through the line to the center when necessary is provided in this distributed base system.



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**CLAIMS**


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**[Claim]**

[Claim 1] The contents managed table which registers the use conditions of a contents in the contents managerial system which manages a contents, The terminal control table which registers terminal ID or user ID which carries out use consent, The contents use managed table which matches with terminal ID or user ID which carried out use consent, and registers and manages the contents which carried out use consent, and its content which carried out use consent, When the contents use conditions registered into the above-mentioned contents managed table are fulfilled when there is a contents use consent demand from a user terminal, and terminal ID or user ID is registered into the above-mentioned terminal control table The contents management tool which returns an encryption key to contents use consent demand origin authorization of contents use, and in being required, While it connects with a center through a circuit the time of starting, or at any time and is saved in response to a down load of the above-mentioned contents managed table and a terminal control table The contents managerial system characterized by establishing a means to upload the content of the above-mentioned contents use managed table in the center, in a distributed position system through a circuit at any time.

[Claim 2] The contents managerial system of the claim 1 publication characterized by having an unjust prevention means to make an operation of each above-mentioned means stop automatically when the operation status is checked when it connects with a center through the above-mentioned circuit, and proved that it is the unjust use status, in the above-mentioned distributed position system.

[Claim 3] The contents managerial system of the claim 2 publication characterized by having a means to judge with the unjust use status when the communication with the above-mentioned distributed position system, and between predetermined time and a center is not performed normally and an unjust access follows the above-mentioned distributed position system the number of predetermined times, or when a third person accesses unjustly the various above-mentioned tables in the above-mentioned distributed position system.

[Claim 4] A means to register the use conditions of a contents into a contents managed table, A means to register into a terminal control table terminal ID or user ID which carries out use consent, A means to match with terminal ID or user ID which carried out use consent, to register into a contents use managed table the contents which carried out use consent, and its content which carried out use consent, and to manage it, When the contents use conditions registered into the above-mentioned contents managed table are fulfilled when there is a contents use consent demand from a user terminal, and terminal ID or user ID is registered into the above-mentioned terminal control table The contents management tool which returns an encryption key to contents use consent demand origin authorization of contents use, and in being required, While it connects with a center through a circuit the time of starting, or at any time and is saved in response to a down load of the above-mentioned contents managed table and a terminal control table The record medium which recorded the program operated as a center as a means to upload the content of the above-mentioned contents use managed table, through a circuit at any time and in which computer reading is possible.

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DETAILED DESCRIPTION

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[Detailed description]

[0001]

[The technical field to which invention belongs] this invention relates to the contents managerial system and record medium which manage a contents.

[0002]

[Prior art] If it applies only by the system installed in the store or the home when performing use and a management of contents, such as music, conventionally, the management about the right of a contents cannot be performed but it will become difficult for a rightful claimant to acquire a just profit. For this reason, a contents right centralized-control center etc. is prepared, and it connects by the system and the telephone line which were installed in the store or the home, it concentrates in the concerned contents right centralized-control center, and is made to perform use consent of a contents, and capture of charging usage.

[0003]

[Object of the Invention] However, it connects with a contents right centralized-control center directly from a store or a home. In having collected by managing the charging usage in the contents right centralized-control center, while using in response to the down load of a desired contents There is the need of receiving a down load of the contents chosen from them in response to the list of the contents which carry out a line connection a contents right centralized-control center and directly, and are used whenever it uses a contents etc. The amount of data transfer between a contents right centralized-control center, a store, or a home increased, and while the communication cost became high, there was a problem that much time will be needed etc.

[0004] this invention aims at making the function of the concerned digital right box stop automatically, and preventing an unauthorized use, if the possibility of an unauthorized use is detected while establish a digital right box in distributed positions, such as a store and a home, a right management is made to execute by proxy and a reduction of a communication cost is aimed at, in order to solve these problems.

[0005]

[The means for solving a technical problem] With reference to drawing 1 and drawing 4, a The means for solving a technical problem is explained. In drawing 1 and drawing 4, the distributed position system 11 is a computer system prepared in the store or the home, and consists of a digital right box 12, a terminal 21, etc. [0006] It connects with a center 1 by the circuit if needed, and the digital right box 12 consists of the contents managed table 13, the contents use managed table 14, a terminal control table 15, a contents management tool 16, a server cooperation means 17, etc. here.

[0007] The contents managed table 13 registers and manages the use conditions of a contents. The contents use managed table 14 is matched with terminal ID or user ID, and registers and manages the contents which carried out use consent, and its content which carried out use consent.

[0008] A terminal control table 15 registers and manages terminal ID or user ID which carries out use consent. When the contents management tool 16 fulfills the contents use conditions registered into the contents managed table 13 when there is a contents use consent demand from a user terminal, and terminal ID or user ID is registered into the terminal control table 15, authorization of contents use, and in being required, it returns an encryption key to contents use consent demand origin.

[0009] the server cooperation means 17 -- the time of starting of the distributed position system 11, or at any time -- a circuit -- minding -- a center 1 -- connecting -- saving it in response to a down load of the contents managed table 13 and the terminal control table 15 \*\*\* -- at any time -- a circuit -- minding -- uploading the content of the contents use managed table 14 in the center 1 \*\*\* -- etc. -- it carries out

[0010] Next, an operation is explained. The contents use conditions registered into the contents managed table 13 when a contents use consent demand has the contents management tool 16 from a user terminal are fulfilled. And when terminal ID or user ID is registered into the terminal control table 15 Authorization of contents use, and in being required, it returns an encryption key to contents use consent demand origin. While the server cooperation means 17 connects with a center 1 through a circuit the time of starting of the distributed position system 11, or at any time and saves it in response to a down load of the contents managed table 13 and the terminal control table 15 It is made to upload the content of the contents use managed table 14 in the center 1 through a circuit at any time.

[0011] In this case, when the operation status is checked when the unjust prevention means 19 connects with a center 1 through a circuit, and proved that it is the unjust use status, it is made to stop an operation

automatically.

[0012] Moreover, when the communication with the distributed position system 11, and during predetermined time and the center 1 is not performed normally and an unjust access follows the distributed position system 11 the number of predetermined times, or when a third person accesses unjustly the various tables in the distributed position system 11, it judges with the unjust use status and is made to stop an operation.

[0013] Therefore, if the possibility of an unauthorized use is detected while establish the digital right box 12 in distributed positions, such as a store and a home, a right management is made to execute by proxy and a reduction of a communication cost is aimed at, it will be enabled to make the function of the concerned digital right box 12 stop automatically, and to prevent an unauthorized use.

[0014]

[Example] Next, the gestalt of enforcement of this invention and an operation are explained to a detail one by one from drawing 1 using drawing 5.

[0015] Drawing 1 shows the system configuration view of this invention. In drawing 1, a center 1 carries out the centralized control of the contents, and consists of the digital right box cooperation means 2, the contents managed table 3, a contents use managed table 4, a terminal control table 5, a contents management tool 6, etc. here.

[0016] The digital right box cooperation means 2 cooperates among two or more distributed position systems 11 connected through the circuit 7, manages a contents, as shown in the flow chart of drawing 2 mentioned later, cooperates with the digital right box 12 prepared in the distributed position system 11, and manages a contents.

[0017] The contents managed table 3 manages the use conditions of a contents etc., and carries out the generalization management of the contents managed table 13 downloaded to the distributed position system 11 (refer to (a) of drawing 3).

[0018] The contents use managed table 4 manages the use status of a contents, and carries out the generalization management of all the contents use managed tables 14 uploaded from the distributed position system 11 (refer to (c) of drawing 3).

[0019] A terminal control table 5 manages all terminal IDs or user ID which permits use consent of a contents (refer to (b) of drawing 3). The contents management tool 6 cooperates with the distributed position system 11, and carries out the generalization management of the operating condition of a contents.

[0020] It connects with a center 1 through a circuit if needed, and the distributed position system 11 delivers and receives various data, it is the computer system prepared in the store or the home, and forms only the digital right box 12, the terminal 21, or the digital right box 12, and connects a terminal 21 through a circuit or LAN here.

[0021] The digital right box 12 distributes and manages use consent and the operating condition of a contents, and consists of the contents managed table 13, the contents use managed table 14, a terminal control table 15, a contents management tool 16, a server cooperation means 17, etc. here.

[0022] As the use conditions of a contents etc. are managed and it is shown in (a) of drawing 3 mentioned later, the contents managed table 13 is matched with contents ID, registers beforehand use conditions (use conditions, such as a duplicate, an audition, and BGM), and saves them in response to a down load from a center 1.

[0023] The contents use managed table 14 registers and manages the use status of a contents, and as shown in (c) of drawing 3 mentioned later, it registers and manages contents ID which was matched and was used for terminal ID or user ID and a use result (for example, reproducing CD to an audition and a medium sale), use time, a user name, sales, etc. The content of the contents use managed table 14 is registered into the contents use managed table 4 by the side of a center through a circuit in periodical, or serial and the center 1, and carries out a batch management.

[0024] A terminal control table 15 registers beforehand terminal ID or user ID with the capability to which use of a contents is permitted, as terminal ID or user ID using a contents is registered beforehand and it is shown in (b) of drawing 3 mentioned later. The content of this terminal control table 15 is downloaded and registered into the concerned terminal control table 14 in the digital right box S12 from a center 1 by S1 of drawing 2 mentioned later.

[0025] registering the content which returned the encryption key to contents use consent demand origin authorization of contents use, and when required, or carried out use consent, and managing, when a contents management tool 16 fulfills the contents use conditions registered into the contents managed table 13 when use of a contents is managed and there is a contents use consent demand from a terminal 21, and terminal ID or a user ID are registered into a terminal control table 15 \*\*\*\* -- etc. -- it carries out

[0026] the server cooperation means 17 -- the time of starting of the distributed position system 11, or at any time -- a circuit -- minding -- a center 1 -- connecting -- saving it in response to a down load of the contents managed table 13 and the terminal control table 15 \*\*\*\* -- at any time -- a circuit -- minding -- uploading the content of the contents use managed table 14 in the center 1 \*\*\*\* -- etc. -- it carries out

[0027] a terminal 21 -- the digital right box 12 -- connecting -- a use consent demand of a contents -- notifying -- a down load of a contents -- receiving -- that a user uses the concerned contents (use) \*\*\*\* -- etc. -- it carries out and consists of the contents use means 22, a processing means 23, an input unit 24, an output unit 25, etc.

[0028] using the contents which the contents use means 22 gave the contents use consent demand to the

digital right box 12, and use consent was permitted, received the down load of a contents and an encryption key, or the down load of only an encryption key which carries out decode from CD which was set in the terminal 21, and which was \*\*\*\*\* beforehand, and decoded by the encryption key (for example, music audition) \*\*\*\* -- etc. -- it carries out

[0029] that the processing means 23 restores the contents which performs various processings and can be decode-used on the basis of an encryption key \*\*\*\* -- etc. -- it carries out carrying out one selection (for example, clicking one with a mouse selection) of the contents which an input unit 24 inputs various data and designation, and displays a contents list on the screen of an output unit 25, for example, is used from the concerned list \*\*\*\* -- etc. -- it carries out

[0030] Output units 25 are various output units, such as display which displays the list of contents etc., a loudspeaker which utters music when a contents is music, and the recording equipment which records music to a cassette tape.

[0031] Next, according to the order of the flow chart of drawing 2, an operation of the configuration of drawing 1 is explained in detail. Drawing 2 shows the explanation flow chart of this invention of operation.

[0032] In drawing 2, S1 transmits a contents managed table and a terminal control table. As for this, the digital right box cooperation means 2 of the center 1 of drawing 1 transmits the content of the contents managed table 3 and the terminal control table 5 to the digital right box 12 in the distributed position system 11 through a circuit 7.

[0033] S2 receives and accumulates a contents managed table and a terminal control table. This registers into the own contents managed table 13 and the own terminal control table 15 the content of the contents managed table which the digital right box 12 received, and a terminal control table, and accumulates it. It means that it changed into the status that the contents managed table 13 and the terminal control table 15 in the digital right box 12 prepared in the distributed position system 11 are initialized by this (the content downloads, is registered and initializes from a center 1), and it can be used.

[0034] S3 checks the operation status. The operation status of the concerned digital right box 12 is checked ignited by this having been received and accumulated from the center 1 by S2. When it proves that it is used improperly, a communication is not normally performed with a center 1 between -, for example, two days. When there is an unjust access which does not have authorization in the various tables in - digital right box 12 when are judged with the unauthorized use status and an unjust access follows - digital right box 12 the number of predetermined times through a circuit from the exterior It carries out by the ability to stop an operation automatically and not using it, and when it proves that it is not used improperly on the other hand, subsequent S6 etc. is processed and use consent of a contents etc. is performed.

[0035] S4 chooses the contents which a terminal 21 uses (for example, selection of CD which it tries listening). A user operates the terminal 21 of drawing 1 and this chooses one contents which wants to display and try listening a contents list on a screen.

[0036] S5 notifies a use application (report of the purport which it tries listening) of a contents to the digital right box 12. The digital right box 12 where S6 received the notice of S5 performs a right management of a contents. This about the contents in which the contents management tool 16 which constitutes the digital right box 12 received the notice of an audition demand The contents managed table 13 of (a) of drawing 3 mentioned later is referred to. here Since it proved that concerned terminal ID or concerned user ID which carried out the audition demand was registered with reference to the terminal control table 15 here, and there was audition capability further since audition authorization is registered While it answers the terminal 21 of audition authorization of contents request origin, the contents use status is memorized.

[0037] S7 manages an encryption key. Since this was determined as the licence (for example, audition authorization of CD) of a contents by S6, it notifies a contents to the terminal 21 of request [ the encryption key which carries out decode ] origin.

[0038] S8 uses a contents (for example, audition, audition of CD). Since this received the licence of a contents by S6 and received the encryption key which carries out the decode of the contents by S7, it carries out the decode of the enciphered contents which the contents use means 22 in the concerned terminal 21 read from the enciphered contents which was downloaded from the digital right box 12 using the encryption key, or CD distributed beforehand, and uses the concerned contents (for example, uttering the music in CD audition).

[0039] S9 notifies the use result of a contents (for example, report of the audition result of CD). The digital right box 12 where S10 received the report of the use result of the contents from the terminal 21 of S9 manages the use result of a contents. Here, contents ID which was matched and was used for terminal ID (or user ID) which used the contents for the contents use managed table 14 shown in (c) of drawing 3 which the contents management tool 16 in the digital right box 12 mentions later, use results (for example, an audition, a duplicate, etc.), use time, a user name, sales, etc. are registered and managed.

[0040] S11 transmits the use managed table of a contents. This transmits collectively the use status of the contents which registers into the contents use managed table 14, and has been managed by S10 at any time or periodically to a center 1.

[0041] S12 performs an operation status check in the digital right box 12. Like S3, this cannot perform whether the digital right box 12 is used improperly and an unauthorized use according [ when / which was checked and mentioned above / it proves that it has used improperly, stop an operation of the digital right box 12 automatically, and ] to a third person, and carries out them.

[0042] S13 receives the use managed table of a contents. This receives by the center 1 side, the content of

the contents use managed table 14 transmitted by S11 is registered into the contents use managed table 4 by the side of a center 1, and it carries out a generalization management, totals with a moon bundle etc., and is made to collect each user ID (or terminal ID) of every.

[0043] By the above, form the distributed position system 11 in a store, a home, etc., and it connects with a center 1 by the circuit if needed, respectively. From a center 1, in response to a transfer of the content of a contents managed table and a terminal control table, the digital right box 12 prepared in the concerned distributed position system 11 registers with the own contents managed table 13 and the own terminal control table 15, and is accumulated. When there is a contents use consent demand from a terminal 21, use of the contents which had the demand with reference to the these contentss managed table 13 and the terminal control table 15 is permitted. When there is use capability of a contents, while it answers a terminal 21, a contents licence and an encryption key and on the basis of the use report from a terminal 21 (on or basis [ information / when carrying out use authorization ]) The use result of a contents is registered and managed on the contents use managed table 14. And it is periodically enabled to transmit the content of the contents use managed table 14 to a center 1, to carry out a batch management by the center 1 side serially, to total the use result of a contents for every user, and to perform accounting etc.

[0044] Drawing 3 shows the example of a table of this invention. (a) of drawing 3 shows the example of a contents managed table. It prepares in the digital right box 12 of drawing 1, and manages, and this contents managed table 13 is matched with contents ID of a contents, and from a center 1, in response to a down load, illustration carries out as-follows registration of the use conditions of the concerned contents etc., and it accumulates them.

[0045]

- Contents ID:#111 - use conditions : A duplicate, an audition, BGM, etc. - rightful claimant information : - distribution information : Information required in order to distribute a use tariff - others : Here, a rightful claimant information is an information which is shown in (a-1) of drawing 4. A distribution information is an information required in order to distribute a use tariff to a rightful claimant.

[0046] (a-1) of drawing 3 shows the detail (contents #11) of the rightful claimant information of (a) on drawing 3. Here, distinction of use conditions (use conditions, such as sale, a sample, a promotion, and loan) is shown in a lateral card column, and an output (outputs, such as a duplicate, a display, a voice output, and printing) is shown in a lengthwise card column. It is beforehand set as the detail of the use gestalt at each use conditions (use conditions, such as sale, a sample, a promotion, and loan) of every about the output (for example, outputs, such as a duplicate, a display, a voice output, and printing). For example, it sets up so that it may say that a "x moon x day to" a duplicate is permitted in the case of an output "a duplicate" about use conditions "sale." By this, a duplicate will be permitted from a x moon x day about contents #11 of illustration.

[0047] (b) of drawing 3 shows the example of a terminal control table. This terminal control table 15 downloads and registers like illustration terminal ID or user ID which has in a contents the capability using CD distributed beforehand to a down load or a contents from a center 1.

[0048] (c) of drawing 3 shows the example of a contents use managed table. This contents use managed table 14 is formed in the digital right box 12 of drawing 1, is managed, and registers and manages contents ID and the use result of a contents which were matched and were used for terminal ID (or user ID).

[0049]

- Terminal ID(user ID):#111 and contents ID : #11 and use result : Duplicate / use time : - user name : - sales : - others : Drawing 4 shows the digital right box detailed block diagram of this invention. This is the detailed block diagram of the digital right box 12 of drawing 1, and since 13 to 17 is the same as that of the thing of the same number of drawing 1, it omits an explanation.

[0050] that the contents data registration means 18 registers the data (terminal ID, used contents ID, a use (use) result, data, such as use time, a user name, and sales) of the contents which carried out use consent into the contents use managed table 15 in drawing 4 \*\*\*\* -- etc. -- it carries out

[0051] As a result of the check of S3 and S12 of drawing 2 mentioned already, the unjust prevention means 19 prevents an unauthorized use of the digital right box 12, when proved that it is an unauthorized use, it stops an operation of the concerned digital right box 12 automatically, and it prevents an unauthorized use.

[0052] The encryption management tool 20 manages the encryption key which carries out the decode of the contents, and it manages the concerned encryption key so that a third person may decode a contents unjustly and cannot use it (use).

[0053] Drawing 5 shows the unauthorized use prevention flow chart of this invention. In drawing 5, S21 transmits a contents managed table and a terminal control table to DRB (digital right box 12) from a center.

[0054] S22 performs a use management of a contents in DRB. The digital right box 12 of drawing 1 which received the transfer of a contents managed table and a terminal control table from the center 1 by S21 registers this into the interior as the contents managed table 13 and a terminal control table 15, and the information is accumulated. Corresponding to a use consent demand of the contents from a terminal 21, the use conditions of a contents are fulfilled with reference to the these contentss managed table 13 and the terminal control table 15. And when it proves that it has just contents use capability, while use consent and the encryption key of a contents are notified and use of a contents is permitted, the use status of a contents is registered into the contents use managed table 14, and is managed.

[0055] S23 transmits a contents use managed table to a center from DRB. This transmits the content of the contents use managed table 14 which registers and manages the use status of a contents by S22 to a center 1.

carries out a batch management in the concerned center 1, and it performs collection of money etc. collectively [ this ].

[0056] S24 is distinguished in a communication error. In YES, it progresses S25. In NO, since the content of the contents use managed table 14 was normally transmitted to the center 1 from the digital right box 12 of S23, it terminates normally.

[0057] Since it proved that the communication error generated S25 by YES of S24, it distinguishes further whether the error exceeded the threshold. In YES, since it proved that the communication error between the digital right box 12 and the center 1 was used improperly exceeding a threshold, the self-stall 12, i.e., a digital right box, carries out a halt of operation by S26, and an unauthorized use is prevented. On the other hand, by S27, in NO of S25, an error is recorded and it ends to it.

[0058] When a communication error arises from the digital right box 12 more than the number of times of predetermined in the center 1 by the above following the case where a transfer etc. carries out the content of the contents use managed table 14 etc. It is enabled to judge that the digital right box 12 is used improperly and for the concerned digital right box 12 to stop an operation in person automatically, and to re-be made not to operate, even if it returns on power or it resets, to detect an unauthorized use automatically, and to stop an operation. In addition, as S3 and S12 of drawing 2 mentioned already described besides when the above-mentioned communication error continues the number of predetermined times, judging with an unauthorized use. When an unjust access follows the digital right box 12 the number of predetermined times through a circuit or a network, judge with an unauthorized use, or When the various tables in the digital right box 12 are accessed without a specific enabling signal, it judges with an unauthorized use. these cases — the same — the digital right box 12 — self — an operation — stopping — a power reclosing — even if it resets, it is [ re-] made not to operate, and the unauthorized use is prevented

[0059]

[Effect of the invention] If the possibility of an unauthorized use is detected while according to this invention establish the digital right box 12 in distributed positions, such as a store and a home, a right management is made to execute by proxy and a reduction of a communication cost is aimed at, as explained above, it will be enabled to make the function of the concerned digital right box 12 stop automatically, and to prevent an unauthorized use.

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TECHNICAL FIELD

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PRIOR ART

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[Prior art] If it applies only by the system installed in the store or the home when performing use and a management of contentss, such as music, conventionally, the management about the right of a contents cannot be performed but it will become difficult for a rightful claimant to acquire a just profit. For this reason, a contents right centralized-control center etc. is prepared, and it connects by the system and the telephone line which were installed in the store or the home, it concentrates in the concerned contents right centralized-control center, and is made to perform use consent of a contents, and capture of charging usage.

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EFFECT OF THE INVENTION

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[Effect of the invention] If the possibility of an unauthorized use is detected while according to this invention establish the digital right box 12 in distributed positions, such as a store and a home, a right management is made to execute by proxy and a reduction of a communication cost is aimed at, as explained above, it will be enabled to make the function of the concerned digital right box 12 stop automatically, and to prevent an unauthorized use.

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TECHNICAL PROBLEM

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[Object of the Invention] However, it connects with a contents right centralized-control center directly from a store or a home. In having collected by managing the charging usage in the contents right centralized-control center, while using in response to the down load of a desired contents There is the need of receiving a down load of the contents chosen from them in response to the list of the contentss which carry out a line connection a contents right centralized-control center and directly, and are used whenever it uses a contents etc. The amount of data transfer between a contents right centralized-control center, a store, or a home increased, and while the communication cost became high, there was a problem that much time will be needed etc.

[0004] this invention aims at making the function of the concerned digital right box stop automatically, and preventing an unauthorized use, if the possibility of an unauthorized use is detected while establish a digital right box in distributed positions, such as a store and a home, a right management is made to execute by proxy and a reduction of a communication cost is aimed at, in order to solve these problems.

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MEANS

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[The means for solving a technical problem] With reference to drawing 1 and drawing 4, a The means for solving a technical problem is explained. In drawing 1 and drawing 4, the distributed position system 11 is a computer system prepared in the store or the home, and consists of a digital right box 12, a terminal 21, etc. [0006] It connects with a center 1 by the circuit if needed, and the digital right box 12 consists of the contents managed table 13, the contents use managed table 14, a terminal control table 15, a contents management tool 16, a server cooperation means 17, etc. here.

[0007] The contents managed table 13 registers and manages the use conditions of a contents. The contents use managed table 14 is matched with terminal ID or user ID, and registers and manages the contents which carried out use consent, and its content which carried out use consent.

[0008] A terminal control table 15 registers and manages terminal ID or user ID which carries out use consent. When the contents management tool 16 fulfills the contents use conditions registered into the contents managed table 13 when there is a contents use consent demand from a user terminal, and terminal ID or user ID is registered into the terminal control table 15, authorization of contents use, and in being required, it returns an encryption key to contents use consent demand origin.

[0009] the server cooperation means 17 — the time of starting of the distributed position system 11, or at any time — a circuit — minding — a center 1 — connecting — saving it in response to a down load of the contents managed table 13 and the terminal control table 15 \*\*\*\* — at any time — a circuit — minding — uploading the content of the contents use managed table 14 in the center 1 \*\*\*\* — etc. — it carries out

[0010] Next, an operation is explained. The contents use conditions registered into the contents managed table 13 when a contents use consent demand has the contents management tool 16 from a user terminal are fulfilled. And when terminal ID or user ID is registered into the terminal control table 15 Authorization of contents use, and in being required, it returns an encryption key to contents use consent demand origin. While the server cooperation means 17 connects with a center 1 through a circuit the time of starting of the distributed position system 11, or at any time and saves it in response to a down load of the contents managed table 13 and the terminal control table 15 It is made to upload the content of the contents use managed table 14 in the center 1 through a circuit at any time.

[0011] In this case, when the operation status is checked when the unjust prevention means 19 connects with a center 1 through a circuit, and proved that it is the unjust use status, it is made to stop an operation automatically.

[0012] Moreover, when the communication with the distributed position system 11, and during predetermined time and the center 1 is not performed normally and an unjust access follows the distributed position system 11 the number of predetermined times, or when a third person accesses unjustly the various tables in the distributed position system 11, it judges with the unjust use status and is made to stop an operation.

[0013] Therefore, if the possibility of an unauthorized use is detected while establish the digital right box 12 in distributed positions, such as a store and a home, a right management is made to execute by proxy and a reduction of a communication cost is aimed at, it will be enabled to make the function of the concerned digital right box 12 stop automatically, and to prevent an unauthorized use.

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[Translation done.]

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EXAMPLE

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[Example] Next, the gestalt of enforcement of this invention and an operation are explained to a detail one by one from drawing 1 using drawing 5.

[0015] Drawing 1 shows the system configuration view of this invention. In drawing 1, a center 1 carries out the centralized control of the contents, and consists of the digital right box cooperation means 2, the contents managed table 3, a contents use managed table 4, a terminal control table 5, a contents management tool 6, etc. here.

[0016] The digital right box cooperation means 2 cooperates among two or more distributed position systems 11 connected through the circuit 7, manages a contents, as shown in the flow chart of drawing 2 mentioned later, cooperates with the digital right box 12 prepared in the distributed position system 11, and manages a contents.

[0017] The contents managed table 3 manages the use conditions of a contents etc., and carries out the generalization management of the contents managed table 13 downloaded to the distributed position system 11 (refer to (a) of drawing 3).

[0018] The contents use managed table 4 manages the use status of a contents, and carries out the generalization management of all the contents use managed tables 14 uploaded from the distributed position system 11 (refer to (c) of drawing 3).

[0019] A terminal control table 5 manages all terminal IDs or user ID which permits use consent of a contents (refer to (b) of drawing 3). The contents management tool 6 cooperates with the distributed position system 11, and carries out the generalization management of the operating condition of a contents.

[0020] It connects with a center 1 through a circuit if needed, and the distributed position system 11 delivers and receives various data, it is the computer system prepared in the store or the home, and forms only the digital right box 12, the terminal 21, or the digital right box 12, and connects a terminal 21 through a circuit or LAN here.

[0021] The digital right box 12 distributes and manages use consent and the operating condition of a contents, and consists of the contents managed table 13, the contents use managed table 14, a terminal control table 15, a contents management tool 16, a server cooperation means 17, etc. here.

[0022] As the use conditions of a contents etc. are managed and it is shown in (a) of drawing 3 mentioned later, the contents managed table 13 is matched with contents ID, registers beforehand use conditions (use conditions, such as a duplicate, an audition, and BGM), and saves them in response to a down load from a center 1.

[0023] The contents use managed table 14 registers and manages the use status of a contents, and as shown in (c) of drawing 3 mentioned later, it registers and manages contents ID which was matched and was used for terminal ID or user ID and a use result (for example, reproducing CD to an audition and a medium sale), use time, a user name, sales, etc. The content of the contents use managed table 14 is registered into the contents use managed table 4 by the side of a center through a circuit in periodical, or serial and the center 1, and carries out a batch management.

[0024] A terminal control table 15 registers beforehand terminal ID or user ID with the capability to which use of a contents is permitted, as terminal ID or user ID using a contents is registered beforehand and it is shown in (b) of drawing 3 mentioned later. The content of this terminal control table 15 is downloaded and registered into the concerned terminal control table 14 in the digital right box S12 from a center 1 by S1 of drawing 2 mentioned later.

[0025] registering the content which returned the encryption key to contents use consent demand origin authorization of contents use, and when required, or carried out use consent, and managing, when a contents management tool 16 fulfills the contents use conditions registered into the contents managed table 13 when use of a contents is managed and there is a contents use consent demand from a terminal 21, and terminal ID or a user ID are registered into a terminal control table 15 \*\*\*\* -- etc. -- it carries out

[0026] the server cooperation means 17 -- the time of starting of the distributed position system 11, or at any time -- a circuit -- minding -- a center 1 -- connecting -- saving it in response to a down load of the contents managed table 13 and the terminal control table 15 \*\*\*\* -- at any time -- a circuit -- minding -- uploading the content of the contents use managed table 14 in the center 1 \*\*\*\* -- etc. -- it carries out

[0027] a terminal 21 -- the digital right box 12 -- connecting -- a use consent demand of a contents -- notifying -- a down load of a contents -- receiving -- that a user uses the concerned contents (use) \*\*\*\* -- etc. -- it carries out and consists of the contents use means 22, a processing means 23, an input unit 24, an

output unit 25, etc.

[0028] using the contents which the contents use means 22 gave the contents use consent demand to the digital right box 12, and use consent was permitted, received the down load of a contents and an encryption key, or the down load of only an encryption key which carries out decode from CD which was set in the terminal 21, and which was \*\*\*\*\*ed beforehand, and decoded by the encryption key (for example, music audition) \*\*\*\*\* — etc. — it carries out

[0029] that the processing means 23 restores the contents which performs various processings and can be decode-used on the basis of an encryption key \*\*\*\*\* — etc. — it carries out carrying out one selection (for example, clicking one with a mouse selection) of the contents which an input unit 24 inputs various data and designation, and displays a contents list on the screen of an output unit 25, for example, is used from the concerned list \*\*\*\*\* — etc. — it carries out

[0030] Output units 25 are various output units, such as display which displays the list of contentss etc., a loudspeaker which utters music when a contents is music, and the recording equipment which records music to a cassette tape.

[0031] Next, according to the order of the flow chart of drawing 2, an operation of the configuration of drawing 1 is explained in detail. Drawing 2 shows the explanation flow chart of this invention of operation.

[0032] In drawing 2, S1 transmits a contents managed table and a terminal control table. As for this, the digital right box cooperation means 2 of the center 1 of drawing 1 transmits the content of the contents managed table 3 and the terminal control table 5 to the digital right box 12 in the distributed position system 11 through a circuit 7.

[0033] S2 receives and accumulates a contents managed table and a terminal control table. This registers into the own contents managed table 13 and the own terminal control table 15 the content of the contents managed table which the digital right box 12 received, and a terminal control table, and accumulates it. It means that it changed into the status that the contents managed table 13 and the terminal control table 15 in the digital right box 12 prepared in the distributed position system 11 are initialized by this (the content downloads, is registered and initializes from a center 1), and it can be used.

[0034] S3 checks the operation status. The operation status of the concerned digital right box 12 is checked ignited by this having been received and accumulated from the center 1 by S2. When it proves that it is used improperly, a communication is not normally performed with a center 1 between -, for example, two days. When there is an unjust access which does not have authorization in the various tables in - digital right box 12 when are judged with the unauthorized use status and an unjust access follows - digital right box 12 the number of predetermined times through a circuit from the exterior It carries out by the ability to stop an operation automatically and not using it, and when it proves that it is not used improperly on the other hand, subsequent S6 etc. is processed and use consent of a contents etc. is performed.

[0035] S4 chooses the contents which a terminal 21 uses (for example, selection of CD which it tries listening). A user operates the terminal 21 of drawing 1 and this chooses one contents which wants to display and try listening a contents list on a screen.

[0036] S5 notifies a use application (report of the purport which it tries listening) of a contents to the digital right box 12. The digital right box 12 where S6 received the notice of S5 performs a right management of a contents. This about the contents in which the contents management tool 16 which constitutes the digital right box 12 received the notice of an audition demand The contents managed table 13 of (a) of drawing 3 mentioned later is referred to. here Since it proved that concerned terminal ID or concerned user ID which carried out the audition demand was registered with reference to the terminal control table 15 here, and there was audition capability further since audition authorization is registered While it answers the terminal 21 of audition authorization of contents request origin, the contents use status is memorized.

[0037] S7 manages an encryption key. Since this was determined as the licence (for example, audition authorization of CD) of a contents by S6, it notifies a contents to the terminal 21 of request [ the encryption key which carries out decode ] origin.

[0038] S8 uses a contents (for example, audition of CD). Since this received the licence of a contents by S6 and received the encryption key which carries out the decode of the contents by S7, it carries out the decode of the enciphered contents which the contents use means 22 in the concerned terminal 21 read from the enciphered contents which was downloaded from the digital right box 12 using the encryption key, or CD distributed beforehand, and uses the concerned contents (for example, uttering the music in CD audition).

[0039] S9 notifies the use result of a contents (for example, report of the audition result of CD). The digital right box 12 where S10 received the report of the use result of the contents from the terminal 21 of S9 manages the use result of a contents. Here, contents ID which was matched and was used for terminal ID (or user ID) which used the contents for the contents use managed table 14 shown in (c) of drawing 3 which the contents management tool 16 in the digital right box 12 mentions later, use results (for example, an audition, a duplicate, etc.), use time, a user name, sales, etc. are registered and managed.

[0040] S11 transmits the use managed table of a contents. This transmits collectively the use status of the contents which registers into the contents use managed table 14, and has been managed by S10 at any time or periodically to a center 1.

[0041] S12 performs an operation status check in the digital right box 12. Like S3, this cannot perform whether the digital right box 12 is used improperly and an unauthorized use according [ when / which was checked and mentioned above / it proves that it has used improperly, stop an operation of the digital right box 12

automatically, and ] to a third person, and carries out them.

[0042] S13 receives the use managed table of a contents. This receives by the center 1 side, the content of the contents use managed table 14 transmitted by S11 is registered into the contents use managed table 4 by the side of a center 1, and it carries out a generalization management, totals with a moon bundle etc., and is made to collect each user ID (or terminal ID) of every.

[0043] By the above, form the distributed position system 11 in a store, a home, etc., and it connects with a center 1 by the circuit if needed, respectively. From a center 1, in response to a transfer of the content of a contents managed table and a terminal control table, the digital right box 12 prepared in the concerned distributed position system 11 registers with the own contents managed table 13 and the own terminal control table 15, and is accumulated. When there is a contents use consent demand from a terminal 21, use of the contents which had the demand with reference to the these contents managed table 13 and the terminal control table 15 is permitted. When there is use capability of a contents, while it answers a terminal 21, a contents licence and an encryption key and on the basis of the use report from a terminal 21 (on or basis [ information / when carrying out use authorization ]) The use result of a contents is registered and managed on the contents use managed table 14. And it is periodically enabled to transmit the content of the contents use managed table 14 to a center 1, to carry out a batch management by the center 1 side serially, to total the use result of a contents for every user, and to perform accounting etc.

[0044] Drawing 3 shows the example of a table of this invention. (a) of drawing 3 shows the example of a contents managed table. It prepares in the digital right box 12 of drawing 1, and manages, and this contents managed table 13 is matched with contents ID of a contents, and from a center 1, in response to a down load, illustration carries out as-follows registration of the use conditions of the concerned contents etc., and it accumulates them.

[0045]

- Contents ID:#111 - use conditions : A duplicate, an audition, BGM, etc. - rightful claimant information : - distribution information : Information required in order to distribute a use tariff - others : Here, a rightful claimant information is an information which is shown in (a-1) of drawing 4. A distribution information is an information required in order to distribute a use tariff to a rightful claimant.

[0046] (a-1) of drawing 3 shows the detail (contents #11) of the rightful claimant information of (a) on drawing 3. Here, distinction of use conditions (use conditions, such as sale, a sample, a promotion, and loan) is shown in a lateral card column, and an output (outputs, such as a duplicate, a display, a voice output, and printing) is shown in a lengthwise card column. It is beforehand set as the detail of the use gestalt at each use conditions (use conditions, such as sale, a sample, a promotion, and loan) of every about the output (for example, outputs, such as a duplicate, a display, a voice output, and printing). For example, it sets up so that it may say that a "x moon x day to" a duplicate is permitted in the case of an output "a duplicate" about use conditions "sale." By this, a duplicate will be permitted from a x moon x day about contents #11 of illustration.

[0047] (b) of drawing 3 shows the example of a terminal control table. This terminal control table 15 downloads and registers like illustration terminal ID or user ID which has in a contents the capability using CD distributed beforehand to a down load or a contents from a center 1.

[0048] (c) of drawing 3 shows the example of a contents use managed table. This contents use managed table 14 is formed in the digital right box 12 of drawing 1, is managed, and registers and manages contents ID and the use result of a contents which were matched and were used for terminal ID (or user ID).

[0049]

- Terminal ID(user ID):#111 and contents ID : #11 and use result : Duplicate / use time : - user name : - sales : - others : Drawing 4 shows the digital right box detailed block diagram of this invention. This is the detailed block diagram of the digital right box 12 of drawing 1, and since 13 to 17 is the same as that of the thing of the same number of drawing 1, it omits an explanation.

[0050] that the contents data registration means 18 registers the data (terminal ID, used contents ID, a use (use) result, data, such as use time, a user name, and sales) of the contents which carried out use consent into the contents use managed table 15 in drawing 4 \*\*\*\* -- etc. -- it carries out

[0051] As a result of the check of S3 and S12 of drawing 2 mentioned already, the unjust prevention means 19 prevents an unauthorized use of the digital right box 12, when proved that it is an unauthorized use, it stops an operation of the concerned digital right box 12 automatically, and it prevents an unauthorized use.

[0052] The encryption management tool 20 manages the encryption key which carries out the decode of the contents, and it manages the concerned encryption key so that a third person may decode a contents unjustly and cannot use it (use).

[0053] Drawing 5 shows the unauthorized use prevention flow chart of this invention. In drawing 5, S21 transmits a contents managed table and a terminal control table to DRB (digital right box 12) from a center.

[0054] S22 performs a use management of a contents in DRB. The digital right box 12 of drawing 1 which received the transfer of a contents managed table and a terminal control table from the center 1 by S21 registers this into the interior as the contents managed table 13 and a terminal control table 15, and the information is accumulated. Corresponding to a use consent demand of the contents from a terminal 21, the use conditions of a contents are fulfilled with reference to the these contents managed table 13 and the terminal control table 15. And when it proves that it has just contents use capability, while use consent and the encryption key of a contents are notified and use of a contents is permitted, the use status of a contents is registered into the contents use managed table 14, and is managed.

[0055] S23 transmits a contents use managed table to a center from DRB. This transmits the content of the contents use managed table 14 which registers and manages the use status of a contents by S22 to a center 1, carries out a batch management in the concerned center 1, and it performs collection of money etc. collectively [ this ].

[0056] S24 is distinguished in a communication error. In YES, it progresses S25. In NO, since the content of the contents use managed table 14 was normally transmitted to the center 1 from the digital right box 12 of S23, it terminates normally.

[0057] Since it proved that the communication error generated S25 by YES of S24, it distinguishes further whether the error exceeded the threshold. In YES, since it proved that the communication error between the digital right box 12 and the center 1 was used improperly exceeding a threshold, the self-stall 12, i.e., a digital right box, carries out a halt of operation by S26, and an unauthorized use is prevented. On the other hand, by S27, in NO of S25, an error is recorded and it ends to it.

[0058] When a communication error arises from the digital right box 12 more than the number of times of predetermined in the center 1 by the above following the case where a transfer etc. carries out the content of the contents use managed table 14 etc. It is enabled to judge that the digital right box 12 is used improperly and for the concerned digital right box 12 to stop an operation in person automatically, and to re-be made not to operate, even if it returns on power or it resets, to detect an unauthorized use automatically, and to stop an operation. In addition, as S3 and S12 of drawing 2 mentioned already described besides when the above-mentioned communication error continues the number of predetermined times, judging with an unauthorized use When an unjust access follows the digital right box 12 the number of predetermined times through a circuit or a network, judge with an unauthorized use, or When the various tables in the digital right box 12 are accessed without a specific enabling signal, it judges with an unauthorized use. these cases — the same — the digital right box 12 — self — an operation — stopping — a power reclosing — even if it resets, it is [ re-] made not to operate, and the unauthorized use is prevented

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[Translation done.]



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DESCRIPTION OF DRAWINGS

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[An easy explanation of a drawing]

[ Drawing 1 ] It is the system configuration view of this invention.

[ Drawing 2 ] It is the explanation flow chart of this invention of operation.

[ Drawing 3 ] It is the example of a table of this invention.

[ Drawing 4 ] It is the digital right box detailed block diagram of this invention.

[ Drawing 5 ] It is the unauthorized use prevention flow chart of this invention.

[An explanation of a sign]

1: Center

2: Digital right box cooperation means

3 and 13:contents managed table

4 and 14:contents use managed table

5, 15:terminal control table

6 and 16:contents management tool

7: Circuit

11: Distributed position system

12: Digital right box

17: Server cooperation means

18: Contents data registration means

19: Unjust prevention means

21: Terminal

22: Contents use means

23: Processing means

24: Input unit

25: Output unit

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[Translation done.]

## \* NOTICES \*

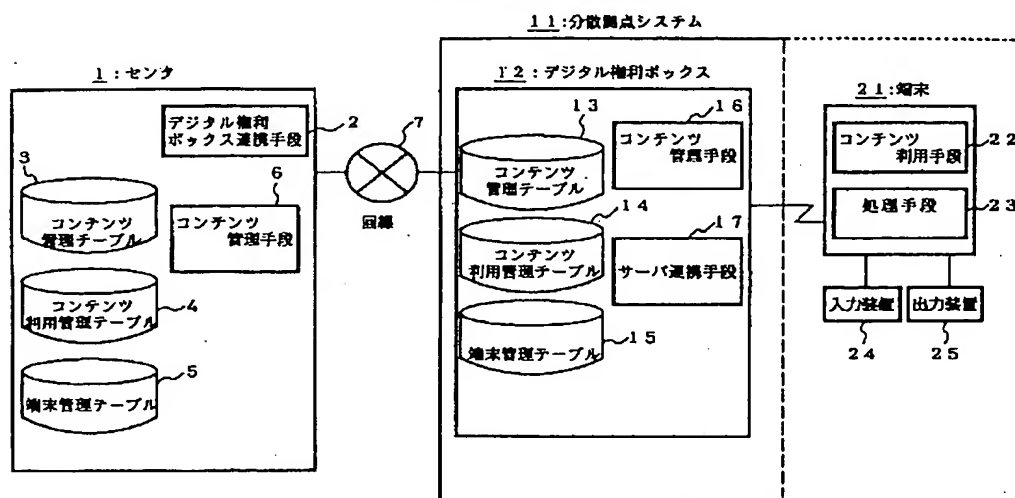
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## DRAWINGS

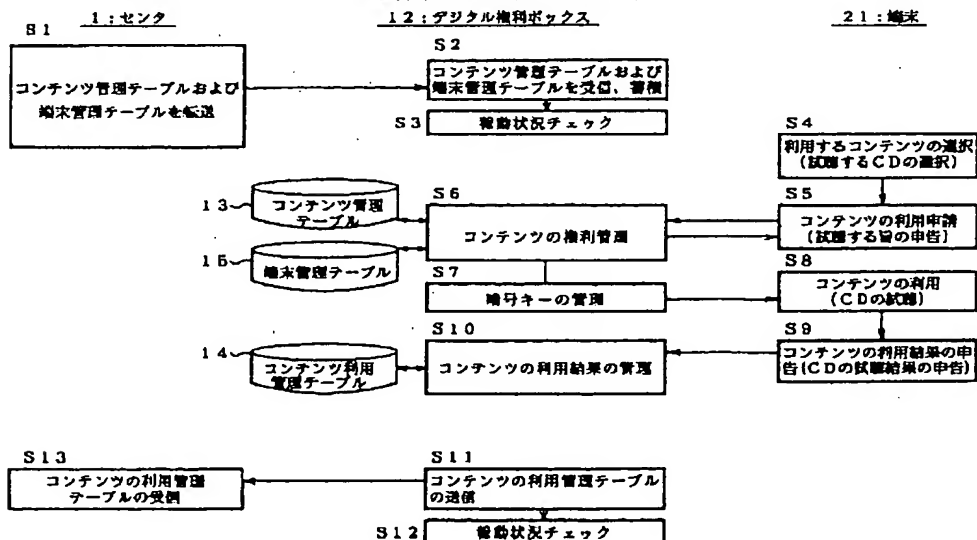
## [ Drawing 1 ]

本発明のシステム構成図



## [ Drawing 2 ]

本発明の動作説明フローチャート



## [ Drawing 3 ]

本発明のテーブル例

## (a) コンテンツ管理テーブル例

コンテンツID	利用条件	権利管理	分配管理
#11	複製、試験、BGMなど		

## (a-1) コンテンツ利用条件詳細 (コンテンツ#11)

利用	販売	サンプル	プロモーション	貸与
複製	×月×日から			×月×日から 2日間
表示		×月×日から		

		30秒のみ		
音声出力			×月×日から ○月○日まで	
印刷				
試験		××秒		

(b) 端末管理テーブル例

15

端末ID	
#1	
#2	

(c) コンテンツ利用管理テーブル例

14

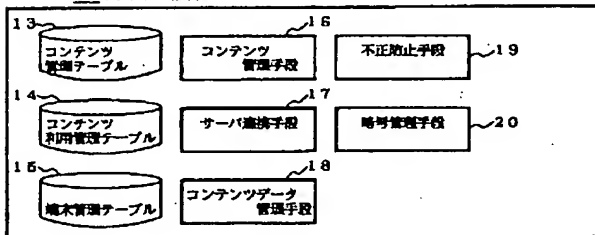
端末ID	コンテンツ	利用結果
#1	#11	検閲
#1	#12	試験

利用日時	利用者名	売上
××××	利用者1	××
××××	利用者1	××

[ Drawing 4 ]

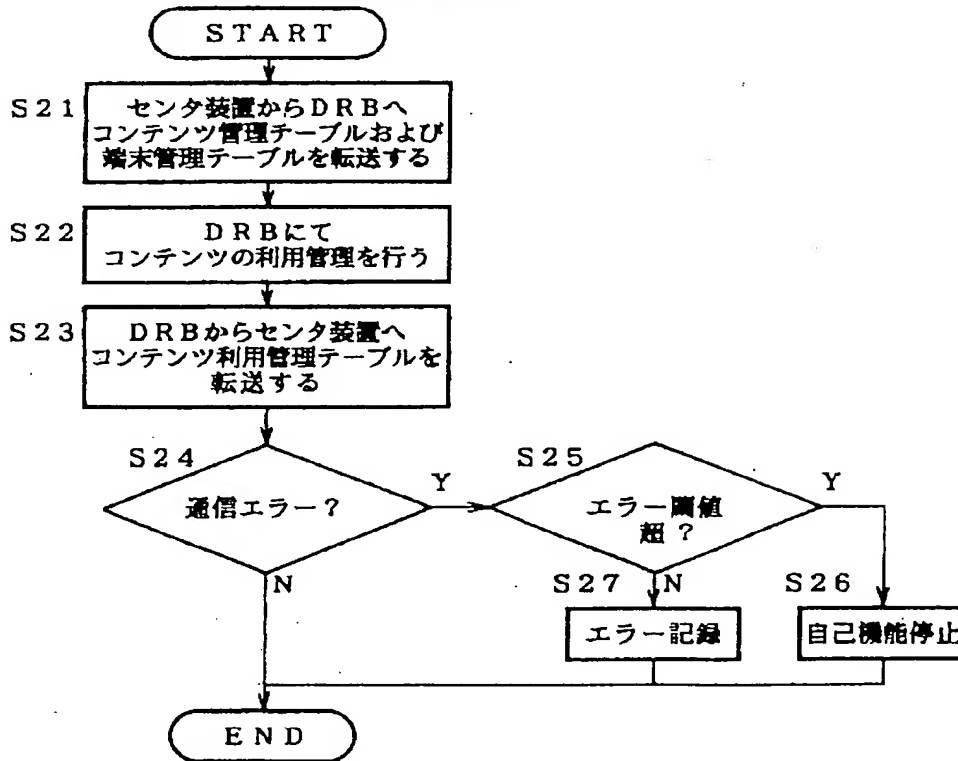
本発明のデジタル権利ボックス詳細構成図

12: デジタル権利ボックス



[ Drawing 5 ]

本発明の不正使用防止フローチャート



[Translation done.]

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(71) 出願人 000136136

株式会社ビーエフユー

石川県河北郡宇ノ気町宇野気ヌ98番地の  
2

(72) 発明者 水野 恵介

石川県河北郡宇ノ気町宇野気ヌ98番地の  
2 株式会社ビーエフユー内

(72) 発明者 柳川 雅裕

石川県河北郡宇ノ気町宇野気ヌ98番地の  
2 株式会社ビーエフユー内

(74) 代理人 100089141

弁理士 岡田 守弘

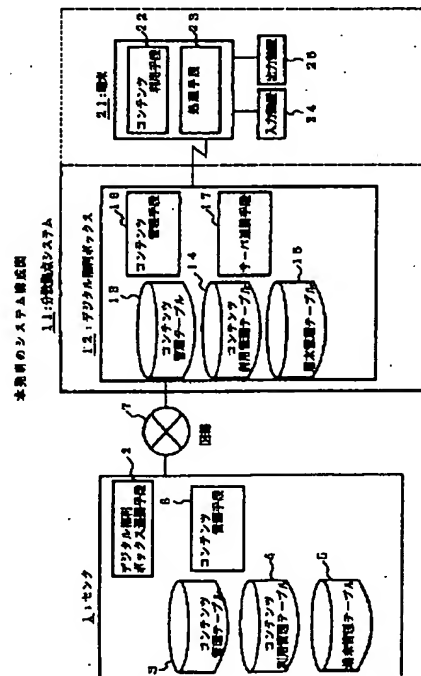
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(54) 【発明の名称】 コンテンツ管理システムおよび記録媒体

(57) 【要約】 (修正有)

【課題】 店舗や家庭などの分散拠点にデジタル権利ボックスを設けて権利管理を代行させて通信コストの低減を図ると共に不正使用を防止する。

【解決手段】 利用者端末からコンテンツ利用許諾要求があったときにコンテンツ管理テーブルに登録されているコンテンツ利用条件を満し、かつ端末管理テーブルに端末IDあるいは利用者IDが登録されていたときに、コンテンツ利用の許可および必要な場合には暗号キーをコンテンツ利用許諾要求元に返送するコンテンツ管理手段と、立ち上げ時あるいは随時に回線を介してセンタに接続してコンテンツ管理テーブルおよび端末管理テーブルのダウンロードを受けて保管すると共に、随時回線を介してセンタに、コンテンツ利用管理テーブルの内容をアップロードする手段とを分散拠点システム内に備えるように構成する。



## 【特許請求の範囲】

【請求項 1】 コンテンツを管理するコンテンツ管理システムにおいて、

コンテンツの利用条件を登録するコンテンツ管理テーブルと、

使用許諾する端末 ID あるいは利用者 ID を登録する端末管理テーブルと、

使用許諾した端末 ID あるいは利用者 ID に対応づけて使用許諾したコンテンツとその使用許諾した内容を登録して管理するコンテンツ利用管理テーブルと、

利用者端末からコンテンツ利用許諾要求があったときに上記コンテンツ管理テーブルに登録されているコンテンツ利用条件を満し、かつ上記端末管理テーブルに端末 ID あるいは利用者 ID が登録されていたときに、コンテンツ利用の許可および必要な場合には暗号キーをコンテンツ利用許諾要求元に返送するコンテンツ管理手段と、立ち上げ時あるいは随時に回線を介してセンタに接続して上記コンテンツ管理テーブルおよび端末管理テーブルのダウンロードを受けて保管すると共に、随時回線を介してセンタに、上記コンテンツ利用管理テーブルの内容をアップロードする手段とを分散拠点システム内に設けたことを特徴とするコンテンツ管理システム。

【請求項 2】 上記回線を介してセンタに接続したときに、稼動状況をチェックして不正利用状態と判明したときに上記各手段の動作を自動停止させる不正防止手段を上記分散拠点システム内に備えたことを特徴とする請求項 1 記載のコンテンツ管理システム。

【請求項 3】 上記分散拠点システムと所定日時の間、センタとの通信が正常に行われなかったとき、上記分散拠点システムに不正アクセスが所定回数続いたとき、あるいは上記分散拠点システム内の上記各種テーブルに第三者が不正にアクセスしたとき、不正利用状態と判定する手段を備えたことを特徴とする請求項 2 記載のコンテンツ管理システム。

【請求項 4】 コンテンツの利用条件をコンテンツ管理テーブルに登録する手段と、

使用許諾する端末 ID あるいは利用者 ID を端末管理テーブルに登録する手段と、

使用許諾した端末 ID あるいは利用者 ID に対応づけて使用許諾したコンテンツとその使用許諾した内容をコンテンツ利用管理テーブルに登録して管理する手段と、

利用者端末からコンテンツ利用許諾要求があったときに上記コンテンツ管理テーブルに登録されているコンテンツ利用条件を満し、かつ上記端末管理テーブルに端末 ID あるいは利用者 ID が登録されていたときに、コンテンツ利用の許可および必要な場合には暗号キーをコンテンツ利用許諾要求元に返送するコンテンツ管理手段と、立ち上げ時あるいは随時に回線を介してセンタに接続して上記コンテンツ管理テーブルおよび端末管理テーブルのダウンロードを受けて保管すると共に、随時回線を介

してセンタに、上記コンテンツ利用管理テーブルの内容をアップロードする手段として機能させるプログラムを記録したコンピュータ読取可能な記録媒体。

## 【発明の詳細な説明】

## 【0001】

【発明の属する技術分野】 本発明は、コンテンツを管理するコンテンツ管理システムおよび記録媒体に関するものである。

## 【0002】

- 10 【従来の技術】 従来、音楽などのコンテンツの利用・管理を行う場合、店舗や家庭に設置したシステムだけで運用すると、コンテンツの権利に関する管理が行えず、権利者が正当な収益を得ることが困難となる。このため、コンテンツ権利集中管理センタなどを設けて、店舗や家庭に設置したシステムと電話回線で接続し、当該コンテンツ権利集中管理センタで集中してコンテンツの使用許諾や使用料の収集を行うようにしていた。

## 【0003】

- 20 【発明が解決しようとする課題】 しかしながら、店舗や家庭から直接にコンテンツ権利集中管理センタに接続し、所望のコンテンツのダウンロードを受けて利用すると共にコンテンツ権利集中管理センタでその使用料を管理して収集を行ったのでは、コンテンツを利用する毎にコンテンツ権利集中管理センタと直接に回線接続しかつ使用するコンテンツの一覧を受けてその中から選択したコンテンツのダウンロードを受ける必要などがあり、コンテンツ権利集中管理センタと店舗あるいは家庭との間のデータ転送量が増え、通信コストが高くなると共に多くの時間が必要になってしまうなどの問題があった。

- 30 【0004】 本発明は、これらの問題を解決するため、店舗や家庭などの分散拠点にデジタル権利ボックスを設けて権利管理を代行させて通信コストの低減を図ると共に不正使用の可能性が検出されると当該デジタル権利ボックスの機能を自動停止させて不正使用を防止することを目的としている。

## 【0005】

【課題を解決するための手段】 図 1 および図 4 を参照して課題を解決するための手段を説明する。図 1 および図 4 において、分散拠点システム 11 は、店舗や家庭に設けたコンピュータシステムであって、デジタル権利ボックス 12 および端末 21 などから構成されるものである。

【0006】 デジタル権利ボックス 12 は、センタ 1 と必要に応じて回線で接続するものであり、ここでは、コンテンツ管理テーブル 13、コンテンツ利用管理テーブル 14、端末管理テーブル 15、コンテンツ管理手段 16、およびサーバ連携手段 17 などから構成されるものである。

- 50 【0007】 コンテンツ管理テーブル 13 は、コンテンツの利用条件を登録して管理するものである。コンテン

ツ利用管理テーブル14は、端末IDあるいは利用者IDに対応づけて使用許諾したコンテンツとその使用許諾した内容を登録して管理するものである。

【0008】端末管理テーブル15は、使用許諾する端末IDあるいは利用者IDを登録して管理するものである。コンテンツ管理手段16は、利用者端末からコンテンツ利用許諾要求があったときにコンテンツ管理テーブル13に登録されているコンテンツ利用条件を満し、かつ端末管理テーブル15に端末IDあるいは利用者IDが登録されていたときに、コンテンツ利用の許可および必要な場合には暗号キーをコンテンツ利用許諾要求元に返送するものである。

【0009】サーバ連携手段17は、分散拠点システム11の立ち上げ時あるいは随時に回線を介してセンタ1に接続してコンテンツ管理テーブル13および端末管理テーブル15のダウンロードを受けて保管したり、随時回線を介してセンタ1に、コンテンツ利用管理テーブル14の内容をアップロードしたりなどするものである。

【0010】次に、動作を説明する。コンテンツ管理手段16が利用者端末からコンテンツ利用許諾要求があったときにコンテンツ管理テーブル13に登録されているコンテンツ利用条件を満し、かつ端末管理テーブル15に端末IDあるいは利用者IDが登録されていたときに、コンテンツ利用の許可および必要な場合には暗号キーをコンテンツ利用許諾要求元に返送し、サーバ連携手段17が分散拠点システム11の立ち上げ時あるいは随時に回線を介してセンタ1に接続してコンテンツ管理テーブル13および端末管理テーブル15のダウンロードを受けて保管すると共に、随時回線を介してセンタ1に、コンテンツ利用管理テーブル14の内容をアップロードするようにしている。

【0011】この際、不正防止手段19が回線を介してセンタ1に接続したときに、稼動状況をチェックして不正利用状態と判明したときに動作を自動停止させるようにしている。

【0012】また、分散拠点システム11と所定時間の間、センタ1との通信が正常に行われなかったとき、分散拠点システム11に不正アクセスが所定回数続いたとき、あるいは分散拠点システム11内の各種テーブルに第三者が不正にアクセスしたとき、不正利用状態と判定し、動作を停止させるようにしている。

【0013】従って、店舗や家庭などの分散拠点にデジタル権利ボックス12を設けて権利管理を代行させて通信コストの低減を図ると共に不正使用の可能性が検出されると当該デジタル権利ボックス12の機能を自動停止させて不正使用を防止することが可能となる。

【0014】

【実施例】次に、図1から図5を用いて本発明の実施の形態および動作を順次詳細に説明する。

【0015】図1は、本発明のシステム構成図を示す。

図1において、センタ1は、コンテンツを集中管理するものであって、ここでは、デジタル権利ボックス連携手段2、コンテンツ管理テーブル3、コンテンツ利用管理テーブル4、端末管理テーブル5、およびコンテンツ管理手段6などから構成されるものである。

【0016】デジタル権利ボックス連携手段2は、回線7を介して接続した複数の分散拠点システム11との間で連携してコンテンツを管理するものであって、後述する図2のフローチャートに示すように、分散拠点システム11内に設けたデジタル権利ボックス12と連携してコンテンツを管理するものである。

【0017】コンテンツ管理テーブル3は、コンテンツの利用条件などを管理するものであって、分散拠点システム11にダウンロードするコンテンツ管理テーブル13を統括管理するものである(図3の(a)参照)。

【0018】コンテンツ利用管理テーブル4は、コンテンツの利用状況を管理するものであって、分散拠点システム11からアップロードされた全てのコンテンツ利用管理テーブル14を統括管理するものである(図3の(c)参照)。

【0019】端末管理テーブル5は、コンテンツの使用許諾を許可する全ての端末IDあるいは利用者IDを管理するものである(図3の(b)参照)。コンテンツ管理手段6は、分散拠点システム11と連携してコンテンツの使用状況を統括管理するものである。

【0020】分散拠点システム11は、店舗や家庭に設けたコンピュータシステムであり、センタ1と必要に応じて回線を介して接続して各種データの授受を行うものであって、ここでは、デジタル権利ボックス12と端末21、あるいはデジタル権利ボックス12のみを設けて回線あるいはLANを介して端末21を接続したものである。

【0021】デジタル権利ボックス12は、コンテンツの使用許諾や使用状況を分散して管理するものであって、ここでは、コンテンツ管理テーブル13、コンテンツ利用管理テーブル14、端末管理テーブル15、コンテンツ管理手段16、およびサーバ連携手段17などから構成されるものである。

【0022】コンテンツ管理テーブル13は、コンテンツの利用条件などを管理するものであって、後述する図3の(a)に示すように、コンテンツIDに対応づけて利用条件(複製、試聴、BGMなどの利用条件)を予め登録してセンタ1からダウンロードを受けて保管したものである。

【0023】コンテンツ利用管理テーブル14は、コンテンツの利用状況を登録して管理するものであって、後述する図3の(c)に示すように、端末IDあるいは利用者IDに対応づけて利用したコンテンツID、および利用結果(例えばCDを試聴、媒体へ複製して販売)、利用日時、利用者名、売上げなどを登録して管理するも

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のである。コンテンツ利用管理テーブル14の内容は、定期的あるいは逐次、センタ1に回線を介して、センタ側のコンテンツ利用管理テーブル4に登録して一括管理する。

【0024】端末管理テーブル15は、コンテンツを利用する端末IDあるいは利用者IDを予め登録するものであって、後述する図3の(b)に示すように、コンテンツの使用を許可する資格のある端末IDあるいは利用者IDを予め登録したものである。この端末管理テーブル15の内容は、後述する図2のS1でセンタ1からデ

ジタル権利ボックスS12内の当該端末管理テーブル14にダウンロードされて登録されるものである。

【0025】コンテンツ管理手段16は、コンテンツの利用を管理するものであって、端末21からコンテンツ利用許諾要求があったときにコンテンツ管理テーブル13に登録されているコンテンツ利用条件を満し、かつ端末管理テーブル15に端末IDあるいは利用者IDが登録されていたときに、コンテンツ利用の許可および必要な場合には暗号キーをコンテンツ利用許諾要求元に返送したり、利用許諾した内容を登録して管理したりなどす

るものである。

【0026】サーバ連携手段17は、分散拠点システム11の立ち上げ時あるいは随時に回線を介してセンタ1に接続してコンテンツ管理テーブル13および端末管理テーブル15のダウンロードを受けて保管したり、随時回線を介してセンタ1に、コンテンツ利用管理テーブル14の内容をアップロードしたりなどするものである。

【0027】端末21は、デジタル権利ボックス12に接続してコンテンツの使用許諾要求を通知し、コンテンツのダウンロードを受けて利用者が当該コンテンツを使用(利用)したりなどするものであって、コンテンツ利用手段22、処理手段23、入力装置24、および出力装置25などから構成されるものである。

【0028】コンテンツ利用手段22は、デジタル権利ボックス12にコンテンツ使用許諾要求を行い、使用許諾が許可されてコンテンツと暗号キーのダウンロード、あるいは端末21内にセットした予め配布されたCDから復号する暗号キーのみのダウンロードを受け、暗号キーで復号したコンテンツを利用(例えば音楽を試聴)したりなどするものである。

【0029】処理手段23は、各種処理を行うものであって、暗号キーをもとに復号して利用できるコンテンツを復元したりなどするものである。入力装置24は、各種データや指示を入力するものであって、例えばコンテンツ一覧を出力装置25の画面上に表示し、当該一覧から利用するコンテンツを1つ選択(例えばマウスで1つをクリックして選択)したりなどするものである。

【0030】出力装置25は、コンテンツの一覧などを表示する表示装置や、コンテンツが音楽の場合には音楽を発声するスピーカや、音楽をカセットテープに録音す

る録音装置などの各種出力装置である。

【0031】次に、図2のフローチャートの順番に従い、図1の構成の動作を詳細に説明する。図2は、本発明の動作説明フローチャートを示す。

【0032】図2において、S1は、コンテンツ管理テーブルおよび端末管理テーブルを転送する。これは、図1のセンタ1のデジタル権利ボックス連携手段2がコンテンツ管理テーブル3および端末管理テーブル5の内容を、回線7を介して分散拠点システム11内のデジタル権利ボックス12に転送する。

【0033】S2は、コンテンツ管理テーブルおよび端末管理テーブルを受信し、蓄積する。これは、デジタル権利ボックス12が受信したコンテンツ管理テーブルおよび端末管理テーブルの内容を、自身のコンテンツ管理テーブル13および端末管理テーブル15に登録して蓄積する。これにより、分散拠点システム11内に設けたデジタル権利ボックス12内のコンテンツ管理テーブル13および端末管理テーブル15が初期化(内容がセンタ1からダウンロードされて登録され初期化)されて使用できる状態にされたこととなる。

【0034】S3は、稼動状況をチェックする。これは、S2でセンタ1から受信して蓄積したことを契機に、当該デジタル権利ボックス12の稼動状況をチェックし、不正使用されていると判明した場合・例えば2日間、センタ1と通信が正常に行われなく、不正使用状態と判定された場合・デジタル権利ボックス12に外部から回線を介して不正のアクセスが所定回数続いた場合・デジタル権利ボックス12内の各種テーブルに許可のない不正アクセスがあった場合などには、動作を自動停止して使用できなくし、一方、不正使用されていないと判明した場合には、以降のS6などの処理を行い、コンテンツの使用許諾などを行う。

【0035】S4は、端末21が利用するコンテンツの選択(例えば試聴するCDの選択)を行う。これは、図1の端末21を利用者が操作し、画面上にコンテンツ一覧を表示し、試聴したいコンテンツを1つ選択する。

【0036】S5は、コンテンツの利用申請(試聴する旨の申告)をデジタル権利ボックス12に通知する。S6は、S5の通知を受けたデジタル権利ボックス12がコンテンツの権利管理を行う。これは、デジタル権利ボックス12を構成するコンテンツ管理手段16が試聴要求の通知を受けたコンテンツについて、後述する図3の(a)のコンテンツ管理テーブル13を参照してここでは、試聴許可が登録されているので、更に、端末管理テーブル15を参照して当該試聴要求した端末IDあるいは利用者IDがここでは登録されており試聴資格があると判明したので、コンテンツの試聴許可を依頼元の端末21に返答すると共に、コンテンツ利用状況を記憶する。

【0037】S7は、暗号キーの管理を行う。これは、

S 6 でコンテンツの使用許可 (例えば CD の試聴許可) と決定されたので、コンテンツを復号する暗号キーを依頼元の端末 21 に通知する。

【0038】S 8 は、コンテンツの利用 (例えば CD の試聴) を行う。これは、S 6 でコンテンツの使用許可を受信し、S 7 でコンテンツを復号する暗号キーを受信したので、当該端末 21 内のコンテンツ利用手段 22 が、暗号キーを用いてデジタル権利ボックス 12 からダウンロードされた暗号化されたコンテンツあるいは予め配布された CD から読み出した暗号化されたコンテンツを復号して当該コンテンツを使用 (例えば CD 中の音楽を発声して試聴) する。

【0039】S 9 は、コンテンツの利用結果の申告 (例えば CD の試聴結果の申告) を行う。S 10 は、S 9 の端末 21 からのコンテンツの利用結果の申告を受けたデジタル権利ボックス 12 が、コンテンツの利用結果の管理を行う。ここでは、デジタル権利ボックス 12 内のコンテンツ管理手段 16 が後述する図 3 の (c) に示すコンテンツ利用管理テーブル 14 にコンテンツを利用した端末 ID (あるいは利用者 ID) に対応づけて利用した

コンテンツ ID、利用結果 (例えば試聴、複製など)、利用日時、利用者名、売上げなどを登録して管理する。

【0040】S 11 は、コンテンツの利用管理テーブルの送信を行う。これは、随時あるいは定期的に S 10 でコンテンツ利用管理テーブル 14 に登録して管理しているコンテンツの利用状況を、まとめてセンタ 1 に送信する。

【0041】S 12 は、デジタル権利ボックス 12 内で移動状況チェックを行う。これは、S 3 と同様に、デジタル権利ボックス 12 が不正使用されていないかチェックし、上述した不正使用していると判明した場合には、自動的にデジタル権利ボックス 12 の動作を停止し、第三者による不正使用をできなくする。

- ・コンテンツ ID : # 111
- ・利用条件 : 複製、試聴、BGM など
- ・権利者情報 :
- ・分配情報 : 利用料金を分配するために必要な情報
- ・その他 :

ここで、権利者情報は、図 4 の (a-1) に示すような情報である。分配情報は、権利者に利用料金を分配するために必要な情報である。

【0046】図 3 の (a-1) は、図 3 の (a) の権利者情報の詳細 (コンテンツ # 111) を示す。ここで、横方向の欄には利用条件 (販売、サンプル、プロモーション、貸与などの利用条件) の区別を示し、縦方向の欄には出力 (複製、表示、音声出力、印刷などの出力) を示す。各利用条件 (販売、サンプル、プロモーション、貸与などの利用条件) 毎にその出力 (例えば複製、表示、音声出力、印刷などの出力) についてその利用形態の詳細に予め設定する。例えば利用条件「販売」について、出

【0042】S 13 は、コンテンツの利用管理テーブルを受信する。これは、S 11 で送信されてきたコンテンツ利用管理テーブル 14 の内容を、センタ 1 側で受信し、センタ 1 側のコンテンツ利用管理テーブル 4 に登録して統括管理し、月締めなどで集計して各利用者 ID (あるいは端末 ID) 毎の集金を行うようにする。

【0043】以上によって、店舗や家庭などに分散拠点システム 11 を設けてセンタ 1 とそれぞれ必要に応じて回線で接続し、当該分散拠点システム 11 内に設けたデジタル権利ボックス 12 がセンタ 1 からコンテンツ管理テーブルおよび端末管理テーブルの内容の転送を受けて自身のコンテンツ管理テーブル 13 および端末管理テーブル 15 に登録して蓄積し、端末 21 からのコンテンツ利用許諾要求があったときに、これらコンテンツ管理テーブル 13 および端末管理テーブル 15 を参照して要求のあったコンテンツの利用が許可されており、かつコンテンツの利用資格が有りのときに、コンテンツ使用許可および暗号キーを端末 21 に返答すると共に端末 21 からの利用申告をもとに (あるいは利用許可したときの情報をもとに)、コンテンツ利用管理テーブル 14 にコンテンツの利用結果を登録して管理する。そして、定期的あるいは逐次、センタ 1 にコンテンツ利用管理テーブル 14 の内容を転送してセンタ 1 側で一括管理して利用者毎などにコンテンツの利用結果を集計して課金などを行うことが可能となる。

【0044】図 3 は、本発明のテーブル例を示す。図 3 の (a) は、コンテンツ管理テーブル例を示す。このコンテンツ管理テーブル 13 は、図 1 のデジタル権利ボックス 12 内に設けて管理するものであって、コンテンツのコンテンツ ID に対応づけて当該コンテンツの利用条件などをセンタ 1 からダウンロードを受けて図示の下記のように登録して蓄積したものである。

【0045】

力「複製」の場合に「×月×日から」複製を許可するというように設定する。これにより、図示のコンテンツ # 111 について、×月×日から複製が許可されることとなる。

【0047】図 3 の (b) は、端末管理テーブル例を示す。この端末管理テーブル 15 は、図示のように、コンテンツをダウンロードあるいは予め配布された CD からコンテンツを利用する資格のある端末 ID あるいは利用者 ID をセンタ 1 からダウンロードして登録したものである。

【0048】図 3 の (c) は、コンテンツ利用管理テーブル例を示す。このコンテンツ利用管理テーブル 14 は、図 1 のデジタル権利ボックス 12 内に設けて管理す



るものであって、端末ID（あるいは利用者ID）に対応づけて利用したコンテンツのコンテンツIDおよび利用結果を登録して管理するものである。

【0049】

・端末ID（利用者ID）：#111  
 ・コンテンツID：#11  
 ・利用結果：複製  
 ・利用日時：  
 ・利用者名：  
 ・売上：  
 ・その他：

図4は、本発明のデジタル権利ボックス詳細構成図を示す。これは、図1のデジタル権利ボックス12の詳細構成図であって、13から17は、図1の同一番号のものと同一であるので説明を省略する。

【0050】図4において、コンテンツデータ登録手段18は、使用許諾したコンテンツのデータ（端末ID、使用したコンテンツID、利用（使用）結果、利用日時、利用者名、売上などのデータ）をコンテンツ利用管理テーブル15に登録したりなどするものである。

【0051】不正防止手段19は、デジタル権利ボックス12の不正使用を防止するものであって、例えば既述した図2のS3、S12のチェックの結果、不正使用と判明した場合に当該デジタル権利ボックス12の動作を自動的に停止させ、不正使用を防止するものである。

【0052】暗号管理手段20は、コンテンツを復号する暗号キーを管理するものであって、第三者がコンテンツを不正に解読して使用（利用）できないように当該暗号キーを管理するものである。

【0053】図5は、本発明の不正使用防止フローチャートを示す。図5において、S21は、センタからDRB（デジタル権利ボックス12）へコンテンツ管理テーブルおよび端末管理テーブルを転送する。

【0054】S22は、DRBにてコンテンツの利用管理を行う。これは、S21でセンタ1からコンテンツ管理テーブルおよび端末管理テーブルの転送を受けた図1のデジタル権利ボックス12が内部にコンテンツ管理テーブル13および端末管理テーブル15として登録してその情報を蓄積し、端末21からのコンテンツの使用許諾要求に対応して、これらコンテンツ管理テーブル13および端末管理テーブル15を参照してコンテンツの利用条件を満たし、かつ正当なコンテンツ利用資格を持っていると判明した場合に、コンテンツの利用許諾および暗号キーを通知してコンテンツの利用を許可すると共に、コンテンツの利用状況をコンテンツ利用管理テーブル14に登録して管理する。

【0055】S23は、DRBからセンタへコンテンツ利用管理テーブルを転送する。これは、S22でコンテンツの利用状況を登録して管理するコンテンツ利用管理テーブル14の内容を、センタ1に転送して当該センタ

1で一括管理し、集金などをまとめて行う。

【0056】S24は、通信エラーか判別する。YESの場合には、S25に進む。NOの場合には、S23のデジタル権利ボックス12からセンタ1に正常にコンテンツ利用管理テーブル14の内容が転送できたので、正常終了する。

【0057】S25は、S24のYESで通信エラーが発生したと判明したので、更に、エラーが閾値を越えたか判別する。YESの場合には、デジタル権利ボックス12とセンタ1との間の通信エラーが閾値を越えて不正使用されていると判明したので、S26で自己機能停止、即ちデジタル権利ボックス12が動作停止し、不正使用を防止する。一方、S25のNOの場合には、S27でエラーを記録し、終了する。

【0058】以上によって、デジタル権利ボックス12からセンタ1にコンテンツ利用管理テーブル14などの内容を転送などする場合に、通信エラーが続いて所定回数以上生じたときに、デジタル権利ボックス12が不正使用されていると判断し、自動的に当該デジタル権利ボックス12が動作を自身で停止し、電源を入れ直したり、リセットしても再動作しないようにし、不正使用を自動的に検出して動作を停止することが可能となる。尚、不正使用と判定するのは、上記した通信エラーが所定回数続いた場合の他に、既述した図2のS3、S12で述べたように、デジタル権利ボックス12に回線やネットワークを介して不正アクセスが所定回数続いた場合に不正使用と判定したり、デジタル権利ボックス12内の各種テーブルを特定の許可信号なしにアクセスした場合に不正使用と判定したりし、これらの場合も同様にデジタル権利ボックス12が自身で動作を停止し、電源再投入やリセットしても再動作しないようにし、不正使用を防止している。

【0059】

【発明の効果】以上説明したように、本発明によれば、店舗や家庭などの分散拠点にデジタル権利ボックス12を設けて権利管理を代行させて通信コストの低減を図ると共に不正使用の可能性が検出されると当該デジタル権利ボックス12の機能を自動停止させて不正使用を防止することが可能となる。

【図面の簡単な説明】

【図1】本発明のシステム構成図である。

【図2】本発明の動作説明フローチャートである。

【図3】本発明のテーブル例である。

【図4】本発明のデジタル権利ボックス詳細構成図である。

【図5】本発明の不正使用防止フローチャートである。

【符号の説明】

1：センタ

2：デジタル権利ボックス連携手段

3、13：コンテンツ管理テーブル

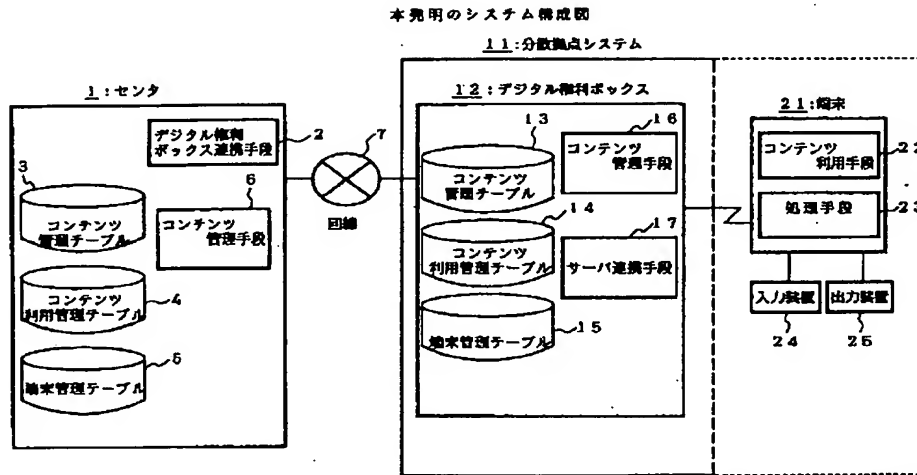
11

- 4、14：コンテンツ利用管理テーブル  
 5、15：端末管理テーブル  
 6、16：コンテンツ管理手段  
 7：回線  
 11：分散拠点システム  
 12：デジタル権利ボックス  
 17：サーバ連携手段

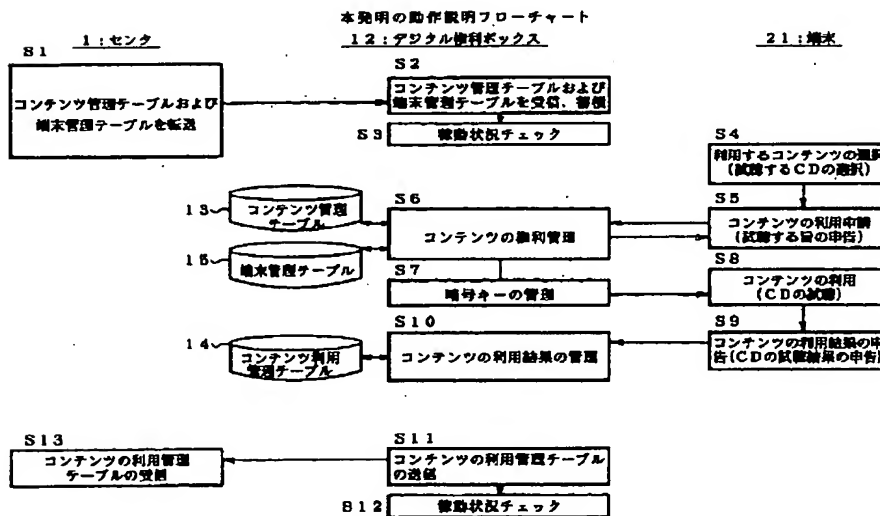
12

- 18：コンテンツデータ登録手段  
 19：不正防止手段  
 21：端末  
 22：コンテンツ利用手段  
 23：処理手段  
 24：入力装置  
 25：出力装置

【図1】



【図2】



【図3】

本発明のテーブル例

(a) コンテンツ管理テーブル例

13

コンテンツID	利用条件	権利者情報	分配情報
#11	複製、複製、BGMなど		

(a-1) コンテンツ利用条件詳細 (コンテンツ#11)

出力	利用	販売	サンプル	プロモーション	貸与
複製		×月×日から			×月×日から 2日間
表示			×月×日から 30秒以内のみ		
音声出力				×月×日から 〇月〇日まで	
印刷					
試験			××秒		

(b) 端末管理テーブル例

15

端末ID
#1
#2

(c) コンテンツ利用管理テーブル例

14

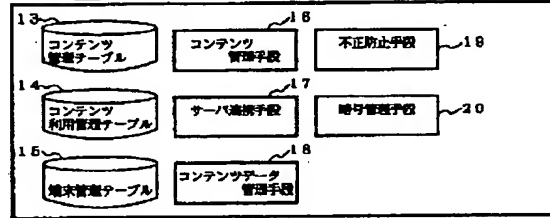
端末ID	コンテンツ	利用結果
#1	#11	複製
#1	#12	試験

利用日時	利用者名	売上
××××	利用者1	××
××××	利用者1	××

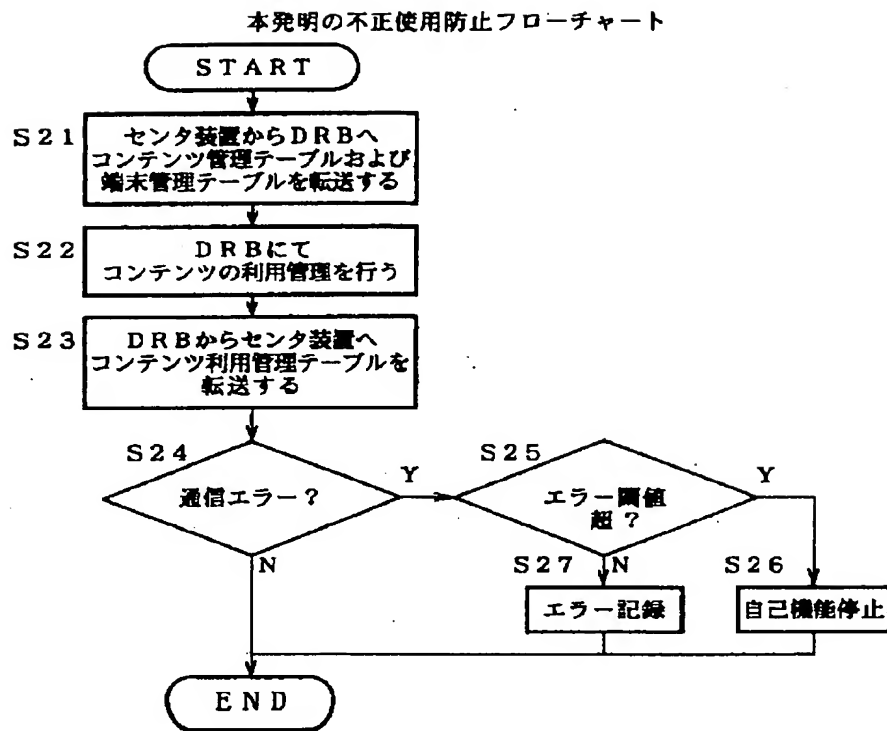
【図4】

本発明のデジタル権利ボックス詳細構成図

12: デジタル権利ボックス



【図5】



フロントページの続き

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